

**Animal Kingdom
Package Solutions****LEVEL – I**

1. (3)
1. Adult echinoderms have radial symmetry but they are all triploblastic.
2. (4)
2. Platyhelminthes are acoelomate.
3. (2)
3. Agnatha means without jaw and they have suckorial mouth.
4. (2)
5. (2)
5. Sagittal plane cut the body into left and right part.
6. (1)
6. In platyhelminthes pseudosegmentation is present
7. (2)
7 Gastrovascular cavity is the characteristic of coelentrata.
8. (1)
9. (4)
9. In nematohelminthes only longitudinal muscle is present.
10. (4)
10. Feather like gills in mollusca helps in both excretion and respiration
11. (3)
11. Roundworm belongs to aschleminthes in which male and female are distinct by morphology.
12. (3)
12. Mesogloea is present in coelentrata also but mesoderm is present in platyhelminthes.

13. (3)

14. (1)

14. Dogfish → two chambered heart
Salamander → three chambered
Alligator → Incomplete 4-chambered
Rabbit → Four chambered

15. (1)

16 (2)

16. *Limulus* belongs to class merostomata and it is not an insect.

17. (3)

17. Moulting does not occur in all the reptilia.

18. (2)

18. Aves have maximum diversity among tetrapoda, counting 6600 family.

19. (3)

19. Sucker's are not present in free-living platyhelminthes.

20. (3)

20. Maximally eumetazoans are diploid.

21. (1)

21. All are mollusca, possess mantle, in bivalvia, radula is absent.

22. (2)

22. Bilateria includes all acoelomates, pseudocoelomate and eucoelomates.

23. (2)

24. (3)

24. Radula is absent in bivalvia, and in many cephalopoda like octopus shell is not present.

25. (4)

26. (2)
26. Pearl is formed by inner layer of shell.
27. (4)
27. Scattered pouches is the characteristics feature of pseudocoelomates animals.
28. (2)
28. Elphidium is a free living protozoan all other are parasitic protozoan.
29. (4)
29. Cnidoblasts cells are not present in basal disc, and mesogloea
30. (3)
30. Blood fluke (schistosoma) are exceptional flatworm in which distinct sex is present.
31. (3)
31. Hirudinea is a ectoparasitic annelid in which one pair of sucker is present.
32. (3)
32. In many of the reptiles tympanum represents the opening of ear.
33. (2)
33. Bony fish belongs to superclass pisces, where as other belongs to superclass tetrapoda.
34. (3)
35. (2)
35. Dorsal heart present only in invertebrates chordates, possess ventral heart.
36. (2)
36. In Amphibians skull is dicondylic. Occipital bone of cranium possess two occipital condyl.
37. (1)
37. All the given feature is the characteristics of cartilaginous fish and '*scoliodon*' belongs to this group.
38. (2)
38. In *musca domestica* (Housefly), larva and pupal stage is present during its embryonic development.

39. (4)
39. Pennatula – coelentrata
Euspongia – Porifera
Physalia – Coelentrata
40. (4)
40. All echinoderms are exclusively marine.
41. (3)
41. Presences of ventral solid central nervous system is characteristics of all higher group of invertebrates.
42. (1,2)
42. All the given example, belong to group 'Vertebrata' excluding mammal so that answer will be both 1 and 2.
43. (2)
44. (2)
45. (2)
45. Bilateria includes all deutostomes which includes all vertebrata and in tetrapoda, except amphibian all are amniotes.

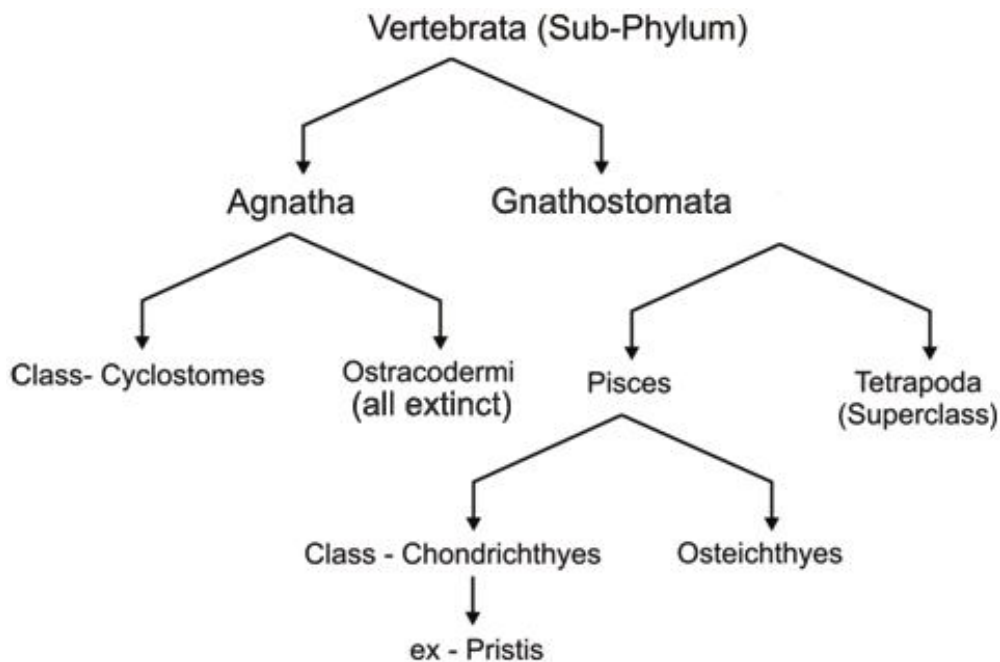
LEVEL – II

1. (1)
1. Cephalochordata is a group of chordata, in which all the characteristics are present.
2. (2)
3. (3)
3. From the phylum porifera to hemichordata, we can find muscular heart (in annelid) respiratory pigments (in mollusca) endoskeleton in echinodermata, but they all lack notochord and dorsal nerve cord.
4. (1)
4. Annelids are both monoecious and dioecious.
5. (1)
5. Change of life from sedentary to active mode, is the basis for development of bilateral symmetry.
6. (2)
6. Hydra is a freshwater polyp and Aurelia is a marine medusoid, hence metagenesis is not possible is that.
7. (4)
7. Obelia is a Hydrozoan cnidaria, in which polyp and medusa form both are present, its medusa contains statocyst or tentaculocyst as a balancing organ.
8. (3)
8. Annelids and locust have tube with in tube body plan, and both have bilateral symmetry.
9. (3)
9. *Phlebotomus* or sand fly is the vector of *Leishmania donovani* which causes Kala-azar.
10. (3)
11. (4)
11. Among mammals scales are present in scaly ant eater, where as in aves scales are present in hind limbs only.
12. (3)

12. Carnivora is a order of infraclass eutheria similarly mammalia as a class, can be divided into subclass – theria, and prototheria. Theria can be further divided as metatheria and eutheria.

13. (3)

13.



14. (2)

14. Persistent notochord clasper is present only in chondrichthyes. Four pairs of gills present in osteichthyes only. Dermal scales are the unique features of pisces.

15. (4)

15. In this group examples are from cnidaria as well as ctenophora.

16. (2)

16. Septa is present in annelids only for internal segmentation.

17. (3)

17. In Cephalopoda class of mollusca fertilization is internal, development is direct and blood vascular system is of close type.

18. (3)

18. Given characteristic represent the feature of both cartilaginous and body fish. Chimera belongs to chondrichthyes which also possess operculum.

19. (3)

19. Volant means flying adaptation and nucleated RBCs are also present in amphibians and reptiles as well as pisces.
20. (3)
21. (2)
21. Pseudocoelomata are triploblastic and hence they possess mesoderm. Platyhelminthes are triploblastic, but alimentary canal is incomplete.
22. (2)
23. (4)
23. It is *Nereis*, in which sexes are separate.
24. (1)
24. Diagram 'a' belongs to Medusa form of Cnidaria, and 'b' is an example to Ctenophora. In medusa form sexes are separate.
25. (2)
25. Glandular skin is present only in mammals.
26. (2)
26. Copulatory organ like clasper present in chondrichthyes, which are viviparous also. Egg laying mammals lack placenta. Reptiles always breathe through lungs
27. (4)
27. Kangaroo and bat both are viviparous. All are mammals, hence all possess mammary gland. In c and d forelimbs are modified into wings and flipper.
28. (2)
28. Given diagram belongs to group cyclostomes and cartilaginous fish, hence all the features are common in both of them.
29. (3)
29. In here external fertilization takes place.
30. (4)
30. Acoelomates are triploblastic, hence mesoderm is present. In triploblastic acoelomates development is protostomatic.

ASSERTION AND REASONING

1. **(1)**
1. Bilateral symmetry start from platyhelminthes, in which cephalisation start for active movement helps in evolution of bilateral symmetry.

2. **(4)**
2. Among cnidarian corals possess calcareous exoskeleton, where as poriferans possess calcareous or silicious spicules as endo skeleton.

3. **(4)**
3. Only in cindarian we can consider blind sac body plan.

4. **(1)**
4. Most of the adult Echinoderm develop sedentary mode of life.

5. **(4)**
5. Metamerism is also present in Arthoropoda and Chordata.

6. **(3)**
6. In Sponges digestion takes place either in choanocytes or trophocytes.

7. **(3)**
7. Polyp and Medusae, both are diploid phase of obelia.

8. **(1)**

9. **(1)**
9. In some of the platyhelminthes like tapeworm pseudo segmentation is present.

10. **(4)**
10. In round worm hooks and suckers are absent.

11. **(1)**
11. Among the monoecious organism, few animals like tapeworm perform self fertilization, as adult tapeworm number is only one is host body.

12. **(1)**
12. Cephalisation appears in triploblastic animals required for active movement.

13. **(2)**
13. Presence of capillary system is necessary for closed circulatory system.

14. (3)
14. In cockroach circulatory system is independent of its respiratory system (tracheal system)
15. (1)
15. Complete metamorphosis in arthropods include larval and pupal cycle stages in its life cycle.
16. (4)
16. Many of the mollusca like octopous shell is absent.
17. (4)
17. Feather like gills are present in mantly cavity.
18. (2)
18. Hemichordates possess both ventral and dorsal nerve chord.
19. (1)
19. All the five basic feature of chordates are present in cephalochordates like amphioxus through out life.
20. (1)
20. Cyclostomes belongs to agnatha in which its endoskeleton and like chondrichthyes class of pisces.
21. (1)
21. Presence of swim bladder is the characteristic feature of bony fishes.
22. (1)
22. In amphibian ribs are not present and hence thoracic breathing is not possible.
23. (3)
23. Only aves are strictly oviparous, few reptiles are viviparous also.
24. (4)
24. Egg laying mammals do not possess placenta.
25. (3)
25. In aves skin is non-glandular.

- 26. (1)**
26. Archaeocytes are the characteristic cells of sponges present in its mesogloea.
- 27. (3)**
27. Tapeworm infection takes place through improperly cooked food, roundworm infection takes place through contaminated food and water and pin worm infection takes place through its direction penetration of soft skin.

PREVIOUS YEARS

- 76. (3)**
76. Silverfish belongs to insecta.
- 77. (4)**
77. All are belongs to phylum arthropoda.
- 78. (2)**
78. Ascariasis spread through contaminated food and water.
- 79. (4)**
79. Spiny anteater – Mammal
Cuttle fish – Mollusca
Spider, Scorpion – Arachnrdla
- 80. (2)**
80. Adamsia – Coelentrata
Limulus – Arthropoda